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Career Choice and it's Influencing Factors: Perception of Female Construction Students

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Abstract

This study explores the career preferences of female undergraduate students in construction programs and examines the factors that predict their choices to undertake a career in construction. Data was collected using close-ended questionnaire in a survey of 229 conveniently sampled university students enrolled in construction-related programs in South Africa. Results from the questionnaire survey revealed that outcome expectations, perceived barriers, goal representations, social supports and gender stereotypes had the most influence on the career choice of women in the construction industry. Although an extensive review of existing literature on the topic was conducted, the scope of the study is limited to the perceptions of women enrolled in construction-related undergraduate programmes in two universities in the Kwa-Zulu Natal province of South Africa.

Keywords

Career Choice, Construction, Gender, SCCT, Women

1. Introduction

Gender-related studies have revealed that women's career choices are affected by social and cultural role expectations (Powell et al., 2009). Due to cultural influences, many women are brought up with the understanding that they cannot undertake non-traditional careers such as construction and are advised to follow instead 'soft skills' occupations such as nursing (Sangweni, 2015). Their primary roles are to take care of the family and nurture their children, while their spouses are the breadwinners and are entitled to the workplace (Madikizela and Haupt, 2010; English and Le Jeune, 2012). Putting women's roles in such stereotypical boxes is one of the hindrances that shorten the working life of women and makes it impossible to maintain an upward trend in the number of women in construction (Moodley, 2012; Enshassi and Mohammaden, 2012).

Despite several initiatives and legislations advocating for equality and diversity, the construction industry remains excessively gender stratified and conservative in the recruitment and retention of women (Aulin and Jingmond, 2011; Sang and Powell, 2012). This has been particularly evident in the African construction industry, where patriarchy is an obstacle to women's growth and development (Koch et al., 2009). A lack of understanding of girls and women's career choice and development is a significant obstacle to attracting women into the construction industry. Although the industry has sought to find solutions to the problem of under-representation of women, progress seems to be very slow and erratic. Despite the existence of a significant range of studies on gender and women's career choice and development in construction (Ahuja and Kumari, 2012; English and Hay, 2015; Madikizela and Haupt, 2010; Powell et al., 2009), limited progress has been to develop interventions and strategies that can be applied to the women and minorities in the construction industry (Brown, 2002; Moore, 2006).

Much of the current literature describes a variety of formidable constraints facing women in the construction sector ranging from sexual harassment, the industry's low image, glass ceiling, sexist attitudes, discrimination, unfavorable policies, and regulations to lack of education and training programs suited to accommodate the roles of women as being mothers and career women (Haupt and Fester, 2012). The institutionalized discrimination, which is deeply rooted in the industry, make construction less attractive to non-traditional entrants and prevents women from considering careers within the industry (Alves and English, 2018).

Worldwide, the construction industry is currently facing skill shortages, and diversity-based levels are inadequate in meeting the skill gap (Worrall et al., 2010; Vainikolo, 2017). English and Hay (2015); Worrall et al. (2010) suggested that encouraging the participation of women would enable untapped resources, promote inclusivity, and improve the skill gap in the industry. Women possess a unique set of skills which could diversify the industry organisational culture and provide a competitive advantage (Fernando et al., 2014).

Numerous studies examining career choices have emphasized individual cognitive factors, paying little attention to environmental factors. However, this study sought to investigate the significance of environmental variables, which are perceived to have a greater influence on career decisions and focuses specifically on women’s decisions in undertaking work in construction-related disciplines as a significant outcome in construction careers.

Table 1 shows a comparison of existing literature with regards to the predictors of career decision and development.

Table 1: Core Predictors of career choice identified from the literature

SCCT Constructs	Saifuddin et al. (2013)	Hunt et al. (2016)	Ali et al. (2006)	Daniels (2012)	Chronister et al. (2003)	Kelly (2009)	Lent et al. (2008)	Patton et al. (2007)
Self- Efficacy	✓	✓	✓	✓	✓	✓	✓	✓
Outcome Expectations	✓	✓	✓	✓	✓	✓	✓	✓
Goal representations	✓				✓	✓	✓	
Social supports	✓	✓					✓	
Learning Experience	✓	✓	✓					
Interest					✓		✓	
Gender Stereotypes			✓	✓		✓		
Perceived Barriers	✓	✓	✓		✓	✓		✓
Access to Opportunity Structures							✓	✓

Self-efficacy has been found to play a crucial role in the career choices of individuals (Charity-Leeke, 2012; Hackett and Betz, 1981; Sawtelle et al., 2012). Self-efficacy belief typically influences a person’s academic and professional aspirations is influenced by learning experiences (Saiffudin et al., 2013). In Outcome expectations are anticipations of possible consequences from chosen actions and work-related behaviours (Lent et al., 2008; Kelly, 2009). Goal representations are achievement-related choices (Lent and Brown, 2006). All these factors in combination with background factors and personal inputs such as gender, race and ethnicity are the most prevailing predictors of career decision making as they are also suggested to influence learning experiences (Kelly, 2009, Charity-Leeke, 2012). Learning experiences are verbal encouragements, supports and modelling from significant others used to maximise the performance accomplishment of a person (Flores et al., 2010). Interests are hypothesized to result in actual engagement in activities which lead to performance outcomes (Kelly, 2009).

Opportunity structures tend to promote or hinder obligatory control in career choice behaviour (Lent et al., 1994). Career development and choice theories acknowledge that although a person acts as a free agent in the selection of a career path, circumstances and external influences may restrict personal career choices (Lent et al., 2008). While the proposed conceptual model permits the practice of personal agency, it also stresses the factors that serve to restrict, promote, invalidate personal obligation in the career choice process. Noteworthy are the differential barriers experienced by men and women, and among women from different socio-economic backgrounds in the career, choice process assumed to result from socialization and learning experiences as it has been highlighted in numerous studies (Charity-Leeke, 2012; Eccles, 1984; Pio et al., 2013).

Opposing trends in the professional development of South African women in construction suggest that contextual and environmental factors play a significant role in shaping their career choices. Sangweni (2015) argued that numerous studies aimed to examine the declining participation in construction among South African women may not fully capture the dynamics of career choices for women aspiring to undertake careers in construction. The study deals explicitly with the influence of social and environmental on the career choice behaviour of girls and women to pursue careers in construction in the South African context.

2. Materials and Methods

2.1 Study Design

The study implemented a descriptive survey design adopting a quantitative research approach. The study conveniently selected two public universities in the KwaZulu-Natal province of South Africa to participate in the study. The two universities were conveniently chosen because of their proximity to the researcher. In this study, a sample size of 229 was used for the analysis. The sample size reduced the chance of arriving at negative results and determined the truth while engendering reproducibility of results.

2.2 Study Subjects

Students enrolled in construction-related programmes such as construction management, land surveying, building, civil engineering, quantity surveying and architecture were chosen as the sample frame.

2.3 Data Collection Tool

The study used a close-ended questionnaire in a survey. The questionnaire administered was developed from the Delphi study and supported by the review of the literature. The survey questionnaire was administered for five weeks. The questionnaires were designed using Google forms and administered electronically by sending out hyperlinks to the questionnaire via email and the WhatsApp platform. Students were asked to indicate to which extent the nine provided variables may influence their current preferred specialty using a Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree).

3. Results

3.1 Demographic Statistics

Table 1 shows the demographic distribution of the respondents. First year students had the largest number of participants with 94 students (41%), followed by 2nd year students at 87 (38%). This rate of participation is possible because of the 1st year cohort of students at South African Universities being usually larger than the later years or more advanced levels of study.

There were 116 men (50.7%) in the sample. Most respondents were enrolled in the discipline of Construction Management (n= 110; 48%), which also accounted for the largest number of participants because of both of the participating universities offering the programme. Architecture had the lowest number of students (n=1; 0.4%) in the sample because only one of the universities offered the programme and typically had smaller numbers of students compared to the other disciplines and programmes.

Table 1. Demographic Distribution

Gender	Frequency	Percent
Man	116	50.7%
Woman	113	49.3%
Total	229	100.00%
Year of Study		

1 st year	94	41.0
2 nd year	87	38.0
3 rd year	30	13.1
4 th year	18	7.9
Total	229	100.00%
Programme of Study		
Constructi on Managem ent	110	48.0
Land Surveying	4	1.7
Quantity Surveying	50	21.8
Civil Engineering	17	7.4
Building	47	20.5
Architecture	1	0.4
Total	229	100.00%

3.2 Student's Perception of Career Choice Predictors

Table 2 presents the normality test and descriptive results for the factors and predictors of career choice in construction. The assessment of the influence of the predictors on student's career choices revealed that the item "*I would like to perform well at my job*" with a mean score of 4.62 had the most influence on student's career choices. The statistics showed that the item "*Because of my gender, I will earn a lower salary than my counterparts for similar work*" had the lowest mean score (1.89), indicating least influence on the career choice of students.

It was further revealed that outcome expectations (mean score =57.10), perceived barriers (mean score = 40.46), goal representations (mean score= 29.16), social supports (mean score=23.12) and gender stereotypes (mean score =21.92) had the most influence on career choice. The mean scores obtained revealed learning experiences as the career choice predictor with the least influence.

Kolmogorov-Smirnov Z and Shapiro-Wilk were adopted for the normality tests of the elements. The Shapiro-Wilk test and Kolmogorov-Smirnov test makes comparisons between the scores obtained from a sample to normally distributed score sets with the same mean and standard deviation. The tests assess the normality of the distribution of scores. A non-significant test result, namely the test significance is greater than .05, means that the difference is insignificantly different from a normal distribution, therefore indicating normality. Numerous studies have asserted that the Shapiro-Wilk test is the most effective test for normality compared to other tests (Razali and Wah, 2011). As shown in Table 2, the Kolmogorov-Smirnov Z and Shapiro-Wilk tests indicated a non-normal distribution at 0.000 for all the variables.

Table 2. Perception of Career Choice Predictors

	Mean	Std. Dv.	Rank	Kolmogorov-Smirnov ^a			Shapiro-Wilk				
				Stat	df	Sig.	Stat	df	Sig.		
Self-Efficacy	I have confidence in my ability to identify resources, limitations, and personal characteristics that might influence my career choices.	3.97	.982	30	7	.292	229	.00	.793	229	.000
	I am confident about being able to collect information about training and employment opportunities for myself and manage them effectively.	4.05	.923	26		.222	229	.00	.832	229	.000

	I am confident about being able to develop lists of priorities on the effective actions to successfully manage my own personal professional development	4.02	.908	28		.253	229	.00	.826	229	.00
	I am confident about being able to plan the steps needed to realize a project related to my profession	4.02	1.02	28		.277	229	.00	.805	229	.00
	I am confident about being able to address any difficulties related to my career	4.01	1.06	29		.231	229	.00	.820	229	.00
Outcome Expectations	I expect to earn a good and satisfactory salary	4.37	.862	11	1	.304	229	.00	.697	229	.00
	I expect to get experience and get better jobs in future	4.45	1.007	6		.357	229	.00	.616	229	.00
	I expect to get promoted and get regular salary increases	4.23	.961	19		.281	229	.00	.755	229	.00
	I expect to work in a decent and satisfying work environment	4.33	.933	14		.315	229	.00	.713	229	.00
	I expect to have a stable and secure job	4.32	1.018	15		.315	229	.00	.698	229	.00
	I expect to have a stable career and guaranteed employment	4.29	1.007	17		.300	229	.00	.697	229	.00
	I expect to have a positive image and contribute to the society	4.39	.947	9		.329	229	.00	.648	229	.00
	I expect to have a satisfying lifestyle	4.34	.949	12		.302	229	.00	.704	229	.00
	I expect to have a happy future	4.45	.870	6		.337	229	.00	.657	229	.00
	I expect to feel productive and have a sense of purpose and worth	4.44	.919	7		.340	229	.00	.618	229	.00
	I expect to achieve my career goals	4.49	.989	4		.387	229	.00	.560	229	.00
	I expect to be successful in my career	4.50	.958	3		.386	229	.00	.568	229	.00
	I expect to learn new skills and be able to use these skills and talents in my job	4.53	.929	2		.393	229	.00	.549	229	.00
Goal Representations	I will obtain technical/functional skills in my chosen career	4.17	.965	20	3	.281	229	.00	.741	229	.00
	I will have opportunities for training and development in my chosen career	4.08	.984	25		.289	229	.00	.776	229	.00
	I will have the opportunities for interesting work in my chosen my career	4.09	1.009	24		.273	229	.00	.772	229	.00
	My chosen career will allow me to meet my financial obligations	4.12	1.0179	21		.287	229	.00	.753	229	.00
	I will be successful in my chosen career	4.33	.952	13		.306	229	.00	.695	229	.00
	I will occupy leadership positions in my chosen career	4.09	.992	23		.233	229	.00	.799	229	.00
	My chosen career will make my family, friends and society have a good and positive opinion of me	4.30	1.000	16		.325	229	.00	.707	229	.00
Social Supports	I receive support from both my parents	3.17	1.480	43	4	.191	229	.00	.863	229	.00
	I receive support from my teachers	3.21	1.158	40		.202	229	.00	.908	229	.00
	I receive support from my family members	3.64	1.178	33		.231	229	.00	.874	229	.00

Learning Experiences	I receive support from my peers (e.g. friends, colleagues)	3.50	1.137	34		.237	229	.00	.875	229	.00
	I receive support from my father	2.86	1.663	49		.223	229	.000	.809	229	.00
	I receive support from my mother	3.90	1.435	31		.306	229	.00	.738	229	.00
	I receive support from my significant other (e.g. husband, wife, partner)	2.83	1.369	50		.159	229	.00	.889	229	.00
	I receive positive feedback and encouragement, especially from influential people in my life such as my parents and teachers	4.04	.999	27	9	.234	229	.00	.812	229	.00
	I learn through observing others perform tasks related to my own career	4.01	1.002	2		.268	229	.00	.808	229	.00
	I experience feelings of anxiety, nervousness and fear of failure when performing tasks and activities related to my career	3.67	1.117	32		.218	229	.00	.882	229	.00
	I successfully complete tasks and activities related to my career	4.10	.970	22		.271	229	.00	.784	229	.00
	I enjoy performing tasks and activities related to my choice of profession	4.24	.901	18	6	.275	229	.00	.726	229	.00
	I would like to make a lot of money	4.48	.846	5		.361	229	.00	.641	229	.00
Interests	I would like to receive recognition in the society	4.17	1.061	20		.271	229	.00	.743	229	.00
	I would like to perform well at my job.	4.62	.832	1		.421	229	.00	.491	229	.00
	I enjoy thinking and solving problems	4.38	.883	10		.318	229	.00	.691	229	.00
	I like highly challenging activities and taking risk	4.12	1.039	21		.255	229	.00	.777	229	.00
	Discriminatory attitudes	2.51	1.289	57	2	.169	229	.00	.881	229	.00
	Work-life conflict	2.65	1.112	56		.179	229	.00	.909	229	.00
	Wage gap	3.03	1.088	46		.198	229	.00	.914	229	.00
	Masculine workplace culture	2.95	1.043	48		.237	229	.00	.898	229	.00
	Lack of access to opportunities	3.14	1.358	45		.155	229	.00	.897	229	.00
Perceived Barriers	Poor working conditions	2.95	1.323	48		.165	229	.00	.899	229	.00
	Long working hours	3.18	1.119	42		.227	229	.00	.899	229	.00
	Challenges in career progression	3.21	1.117	40		.197	229	.00	.908	229	.00
	Gender stereotypes	2.86	1.337	49		.146	229	.00	.899	229	.00
	Glass ceiling (Invisible barrier to career advancement)	2.79	1.107	51		.233	229	.00	.898	229	.00
	Lack of knowledge and career information	2.73	1.286	53		.151	229	.00	.900	229	.00
	Lack of role models in my chosen career	2.73	1.237	53		.170	229	.00	.904	229	.00
	Lack of education and training	2.78	1.340	52		.173	229	.00	.892	229	.00
	Lack of opportunities in my chosen career	3.00	1.370	47		.159	229	.00	.892	229	.00
	Gender Stereotypes	2.70	1.373	54	5	.205	229	.00	.882	229	.00

Access to Opportunity Structures	Because of my gender, I will have to work twice as hard as my counterparts	2.68	1.376	55		.196	229	.00	.881	229	.00
	Because of my gender, I will have to occupy a junior position at work	2.18	1.207	60		.224	229	.00	.834	229	.00
	Because of my gender, I will be expected to do administrative work	2.21	1.252	59		.243	229	.00	.831	229	.00
	Because of my gender, I will be expected to have a lesser status in the society	2.13	1.239	62		.241	229	.00	.811	229	.00
	Because of my gender, I will be expected to possess domestic skills rather than technical skills	2.18	1.291	60		.248		.00	.794	229	.00
	Because of my gender, I will be expected to have a low level of education	1.93	1.203	64		.290	229	.00	.757	229	.00
	Because of my gender, I will be expected to choose a career different from the one I prefer	2.14	1.614	61		.254	229	.00	.687	229	.00
	Because of my gender, people will believe I will perform badly in mathematics and science subjects	1.96	1.215	63		.266	229	.00	.761	229	.00
	Because of my gender, I will earn a lower salary than my counterparts for similar work	1.90	1.179	65		.293	229	.00	.754	229	.00
	I have access to information on organizations and jobs in my chosen career	3.48	.989	36	8	.223	229	.00	.888	229	.00
	I have attended various career orientation programs	3.15	1.138	44		.195	229	.00	.911	229	.00
	I have initiated conversations with knowledgeable individuals in my career area	3.36	1.152	39		.240	229	.00	.895	229	.00
	I have access to information on the labour market and general job opportunities in my career area	3.18	1.068	42		.210	229	.00	.905	229	.00
	I have access to information on specific areas of career interest	3.39	1.075	38		.239	229	.00	.894	229	.00

4. Discussion and Conclusions

The survey results presented the evaluation of the factors that predict women's career choices in construction. The findings revealed that the career choices of the respondents were mostly influenced by the interest in performing well, expectations of learning new skills and being able to use these skills and talents in their job, expectations to be successful in their career, expectations to achieve their career goals and the interest to make a lot of money. These findings are consistent with previous studies that expectations of achieving a certain outcome are a significant component of the career choice process of young adults and university students and is a strong predictor of their post-university pathways (Fouad and Guillen, 2006). The study found outcome expectations, perceived barriers, goal representations, social supports and gender stereotypes had the most influence on women's career choices in the construction industry.

The least-influence of learning experiences on the career choices of this population can be explained in several ways. A likely explanation for the results in this study is that the sample may be socio-economically homogenous, as a majority of the respondents are from low SES categories and may not have positive or access to any learning experiences at all. Betz (1989) argued that an environment with little or no information and experiences about some careers for young adults, and neither encourages nor discourages participation in these careers constitutes

a null environment. Further, such an environment with profound poverty due to its impact on learning experiences is unlikely to foster career aspirations and choice.

Another possible explanation can be related to the theory of locus of control (Layton, 1987). Trice et al. (1989) described locus of control as the extent to which a person believes they are in control of their choices and craft their future career plans. Studies argue that career choices are linked to a sense of taking control and taking responsibility for major events life events (Luzzo and Jenkins-Smith, 1998; Abdinoor, 2020). Therefore, people with a high internal locus of control tend to believe career-related occurrences in their lives such as career choices are because of their skills, abilities and internal factors that are within their control. It could be that the respondents in the current study perceive that their career choices are rarely influenced by their experiences.

Although this study sampled female students in the KwaZulu-Natal province of South Africa, a generalization of the findings to the entire South African population needs caution. Further, because the sample in this study was one of convenience, some limitations apply. Since the present sample may be described as unique due to the inclusion of only women enrolled in construction-related programmes at two universities, it is uncertain whether these results may not adequately represent the population of interest and be generalized to a general sample of students in other universities.

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